

03050104-090
(Spears Creek)

General Description

Watershed 03050104-090 is located in Kershaw and Richland Counties and consists primarily of **Spears Creek** and its tributaries. The watershed occupies 45,242 acres of the Sandhills region of South Carolina. The predominant soil types consist of an association of the Lakeland-Wagram-Chastain-Chewacla series. The erodibility of the soil (K) averages 0.28; the slope of the terrain averages 7%, with a range of 0-25%. Land use/land cover in the watershed includes: 68.8% forested land, 9.5% forested wetland, 9.1% agricultural land, 7.0% scrub/shrub land, 4.4% urban land, 1.1% water, and 0.1% barren land.

Spears Creek originates near the Town of Elgin and flows past Fort Jackson U.S. Army Base before draining into the Wateree River. Spears Creek flows through several small lakes including an unnamed 85-acre lake before accepting the drainage of Sloan Branch, Kelly Creek (White Pond), Haig Creek, McCaskill Creek (Rununder Branch, Otterslide Branch), and Raglins Creek. Further downstream Madraw Branch and Moke Branch enter Spears Creek near its confluence with the Wateree River. There are several lakes and ponds (totaling 391.4 acres) and a total of 78.8 stream miles in this watershed, all classified FW.

Water Quality

<u>Station #</u>	<u>Type</u>	<u>Class</u>	<u>Description</u>
CW-154	S/BIO	FW	KELLY CREEK AT S-28-367 2.9 MI SE OF ELGIN
CW-155	P/BIO	FW	SPEARS CREEK AT SC 12 3.6 MI SE OF ELGIN
CW-166	W	FW	SPEARS CREEK AT US 601

Spears Creek - There are two monitoring sites along Spears Creek. This is a blackwater system, characterized by naturally low pH conditions. Although pH excursions occurred at both sites, they were typical of values seen in blackwater systems and were considered natural, not standards violations. At the upstream site (**CW-155**), aquatic life uses are fully supported based on macroinvertebrate community data and natural conditions. There were significant increasing trends in pH, total nitrogen concentrations, and turbidity. A significant increasing trend in dissolved oxygen concentration suggests improving conditions for this parameter. Recreational uses are fully supported. At the downstream site (**CW-166**), aquatic life uses are also fully supported based on natural conditions. Recreational uses are partially supported at this site due to fecal coliform bacteria excursions.

Kelly Creek (CW-154) - This is a blackwater system, characterized by naturally low pH conditions. Although pH excursions occurred, they were typical of values seen in blackwater systems and were considered natural, not standards violations. Aquatic life uses are fully supported based on macroinvertebrate data and natural conditions. There is also a significant increasing trend in pH. Significant decreasing trends in five-day biochemical oxygen demand and total phosphorus concentrations suggest improving conditions for these parameters. Recreational uses are partially supported due to fecal coliform bacteria excursions.

NPDES Program

Active NPDES Facilities

RECEIVING STREAM

FACILITY NAME

PERMITTED FLOW @ PIPE (MGD)

COMMENT

NPDES#

TYPE

LIMITATION

SPEARS CREEK

PALMETTO UTILS./ VALHALLA WWTP

PIPE #: 001 FLOW: 0.355

WQL FOR TRC, DO, NH₃-N, BOD₅

SC0043494

MINOR DOMESTIC

WATER QUALITY

SPEARS CREEK TRIBUTARY

KROGER CO./PONTIAC FOODS

PIPE #: 001 FLOW: M/R

SCG250053

MINOR INDUSTRIAL

EFFLUENT

KELLY CREEK

ARCHIMICA, INC. (NIPA/ HARDWICK CHEMICAL)

PIPE #: 002 FLOW: M/R

SC0002682

MAJOR INDUSTRIAL

EFFLUENT

SLOAN BRANCH

LOVELESS & LOVELESS, INC.

PIPE #: 001 FLOW: M/R

SCG730047

MINOR INDUSTRIAL

EFFLUENT

Nonpoint Source Management Program

Mining Activities

MINING COMPANY

MINE NAME

PERMIT #

MINERAL

CAROLINA CERAMICS, INC.

KOON CLAY MINE

0137-55

KAOLIN

TAYLOR CLAY PRODUCTS CO.

DUNCAN LAKES MINE

0198-55

KAOLIN

TAYLOR CLAY PRODUCTS CO.

TAYLOR MINE

0830-55

KAOLIN

RICHTEX CORP.

GADSON PIT

0409-55

KAOLIN

RICHTEX CORP.

COLEMAN MINE

0185-79

KAOLIN

LOVELESS & LOVELESS, INC.

SCREAMING EAGLE ROAD PIT

0492-55

SAND

HARDAWAY CONCRETE COMPANY, INC. NORTHEAST MINE	0507-79 SAND
CHAMBERS RICHLAND CO. LANDFILL, INC. SCREAMING EAGLE ROAD MINE	0700-79 KAOLIN
TNT SAND TNT SAND MINE	0898-79 SAND
MILDRED R. PORTER PORTER'S PIT	1115-55 SAND/CLAY

Land Disposal Activities

Landfill Facilities

<i>SOLID WASTE LANDFILL NAME FACILITY TYPE</i>	<i>PERMIT # STATUS</i>
SCREAMING EAGLE RD/CHAMBERS LANDFILL MUNICIPAL	402400-1101 (DWP-126) ACTIVE
SOUTHEASTERN ASSOCIATES MUNICIPAL	322428-1201 -----
CLEMSON ROAD DUMP -----	----- CLOSED
SCREAMING EAGLE ROAD MUNICIPAL	DWP-028, DWP-106 CLOSED
CAROLINA CONTAINER NORTHEAST LANDFILL MUNICIPAL	403323-1101 (DWP-134, IWP-226) CLOSED
CAROLINA CONTAINER NORTHEAST LANDFILL MUNICIPAL	402434-1101 ACTIVE
LOVELESS & LOVELESS, INC. CONSTRUCTION	282428-1201 -----

Land Application Sites

<i>LAND APPLICATION SYSTEM FACILITY NAME</i>	<i>ND# TYPE</i>
INFILTRATION BASIN PALMETTO UTILS., INC. REG. WWTP	ND0068411 DOMESTIC
TILE FIELD HACIENDA MOBILE HOME ESTATES	ND0067598 DOMESTIC
SPRAYFIELD HOMELITE/TEXTRON	ND0072818 INDUSTRIAL

Groundwater Contamination

The groundwater in the vicinity of the surface impoundments owned by Archimica Inc. (formerly Hardwicke Chemical) is contaminated with volatile organics, due to spills and leaks (#00204). The surface

water affected is Kelly Creek. Groundwater assessment and remediation plans have been implemented and the facility is under an enforcement action. Also affecting a Spears Creek tributary is the groundwater in the vicinity of the surface impoundments owned by Homelite Textron (formerly Townsend Saw Chain), which are contaminated with chromium and volatile organics. This is a U.S. EPA National Priority Pollutant list site (#SCD980558050) and the facility is in the remediation phase. The facility is located in the Colonels Creek Watershed (03050104-100), but affects Spears Creek in this watershed.

Water Supply

***WATER USER (TYPE)
STREAM***

***REGULATED CAPACITY (MGD)
PUMPING CAPACITY (MGD)***

HARDWICK CHEMICAL CO. (I)
SPEARS CREEK

0.70

Growth Potential

There is a moderate to high potential for residential, commercial, and industrial growth in this watershed. I-20 crosses the area, together with U.S. Hwy. 601 and U.S. Hwy. 1, and S.C. Hwy. 12. There are also several large and growing subdivisions, the Richland County Industrial Park, and a privately owned solid waste landfill to add to future growth in the area. Sewer is provided to this area through a regional system located in Kershaw County. Water service is available from the City of Columbia's water system.